Arnold Engineering Development Center (AEDC)

Contractual Support Services

Statement of Objectives

1.0 Introduction:

HQ Air Force Materiel Command's (AFMC) Arnold Engineering Development Center (AEDC) is a national aerospace ground test facility that conducts tests, engineering analyses, and technical evaluations for research, system development, and operational programs of the Air Force and Department of Defense, other government agencies, and industry. Using ground test facilities, AEDC supports propulsion, aerodynamic, reentry, trans-atmospheric, and space-flight systems testing. Testing is performed in an environment that simulates operational conditions. AEDC performs research to develop new technology for advanced test facilities, test techniques, and measurement methodologies associated with ground tests. The purpose of this Statement of Objectives (SOO) is to obtain the technical expertise and services necessary to support AEDC in execution of its mission. Innovative business arrangements and proposals are encouraged.

2.0 AEDC Mission:

Provide the nation with aerospace ground test and evaluation capabilities, the war fighters with tools, and the System Program Offices (SPOs) and other test centers with knowledge. Support effects-based acquisition by having the right tool, at the right place, at the right time. Meet AFMC/AEDC's strategic goals:

- Satisfy our customers' needs – in war and peace
- Enable our people to excel
- Sustain technological superiority
- Enhance the excellence of our business practices
- Operate quality installations

3.0 Specific Objectives:

Offerors are challenged to propose innovative and cost-effective processes and initiatives to meet the following specific objectives while meeting all performance work statement requirements and performance standards.

3.1 Technical Excellence:

Ensure proactive and sustained technical excellence in providing accurate, safe, secure, timely, and efficient support to meet the Government's established requirements. Sustained technical excellence is essential for AEDC to meet its mission and increase its value to the nation and to its customers. Basic characteristics and attributes of technical excellence include:

- Test and evaluation expertise for supporting current and future weapon systems development using both traditional ground-test environmental simulation and computer simulations of weapon systems' performance. Experienced senior technical leaders in each of the center's core mission areas.
- Use and advancement of Integrated Test and Evaluation (IT&E) techniques. IT&E is the integration of computational modeling techniques (computer simulations) with ground test and flight test data to expand and enhance the utility of test results and/or to determine the next step in a test program. IT&E involves the correlation, validation and updating of computational models with both ground and flight test data.
- Knowledge of the infrastructure such that operations and maintenance effectively meet mission requirements at the least possible cost.
- Responsive, effective mission support services.
- Personnel are experienced, versatile and readily adaptable to the employment of new techniques, procedures, and technology.
- Effective customer relation activities are hallmarked by proactive customer engagement (includes both formal and informal exchanges), feedback, and repeat business. Results garner the highest level of trust in AEDC's processes and services.

3.2 Effective Management and Processes:
Provide qualified and experienced management leadership and processes that when teamed with the government, deliver value to weapon system developers. Basic characteristics and attributes of effective management and processes include:

- A proactive leadership team that is experienced in:
  - managing, operating, maintaining, and modernizing large, complex technical/industrial facilities;
  - managing the full spectrum of support services vital to AEDC's mission accomplishment; and
  - managing change.
- Processes are streamlined, well-defined, and incorporate performance measures to facilitate timely decisions and guide actions. Processes and procedures involve the minimum resource outlay to accomplish work while achieving schedule requirements and performance goals.
- Personnel and scheduling flexibility efficiently supports a dynamic requirements environment across all facets of AEDC's test and evaluation mission execution. Results include quick, efficient, and effective adjustment of labor and material resources.
- Effective lines of communication with all AEDC partners, customers, and interfacing support contractors ensures effective mission execution. Teamwork is recognized as a hallmark of AEDC's government managed, contractor-assisted business model.

- Industry best practices, standards and models for operations, maintenance, engineering, and support functions are deployed to reduce cost and enhance productivity within the context of laws, regulations, policies, and the AEDC environment. Waivers for those practices shown to be beneficial but prevented by current regulations and policies are proposed.

3.3 Performance Dependability:
Ensure asset (test facilities, plants, support facilities, utility systems, and equipment) reliability, availability, maintainability, and configuration management. Basic characteristics and attributes of performance dependability include:

- Operations, maintenance, sustainment, and base support actions are responsive, well integrated, and thoroughly coordinated with customer and government interests. Conflicting requirements are resolved by data-driven solution assessments and sound decision processes.
- Interruptions to operations and services are minimal and mission objectives and customer satisfaction are attained.
- Schedule execution reflects the benefits of proactive maintenance, well-planned lifecycle sustainment (modernization and upgrade), and configuration management of all assets.
- Maintenance and repair, improvement and modernization, and technology investments are effectively applied to eliminate gaps between current asset capability and forecasted needs.
- Existing infrastructure is reduced or modified and new infrastructure is recommended to meet mission needs.
- AEDC's physical, environmental, and cultural assets are protected.

3.4 Efficient, Effective Information Technology and Systems
Provide systems and processes that integrate and streamline information flow to facilitate timely management decisions, ensure reliable facility operations, and provide high quality test and evaluation data. Basic characteristics and attributes of efficient, effective information technology (IT) and systems include:

- All IT capabilities inter-operate within the AEDC IT architecture.
- Business information systems (including work management systems) are integral to the day-to-day decision processes and provide information needed by both the contractor and government through a single user interface.
- Data flows smoothly to and from government standard information systems in a timely, reliable, efficient, and accurate manner.
- Data acquisition and facility control systems are effectively integrated to provide accurate data and safe, responsive facility operation.
- Development and deployment of modeling and simulation tools effectively support the test and evaluation mission.
- Compliance with information security directives.

3.5 Cost Reduction and Control

Significantly reduce and aggressively control the cost of AEDC test and support operations and services while maintaining technical excellence within manageable levels of risk. Basic characteristics and attributes of cost reduction and control include:

- Cost reduction and other improvement initiatives are well defined and include justifications, trade-offs, investment requirements, expected returns, risk assessments, and implementation plans. Proposed initiatives leverage ongoing AEDC initiatives (especially facility modernization initiatives) and are accelerated to maximize benefits in the early years of the contract.
- Initiative results are measured, validated, and documented.
- Cost factors are traceable to work outputs and provide real-time information to support mission decisions. Cost is collected to facilitate government cost allocation to customers in conformance with cost reimbursement policies.
- Cost control includes accurate accounting, thorough assessment, and timely and sound recommendations to address anomalies.